HAPPENINGS at the SAB

...ensuring a solid technical basis for environmental protection

Volume E6 Number 6 June 2001

PUBLIC COMMENTS AT SAB MEETINGS:

The Need to Improve the Process



EDITORIAL

The EPA Science Advisory Board (SAB) has been charged with advising Federal officials on the scientific aspects (including engineering, economics, and other social sciences) of Agency positions on matters such as research, regulations, and voluntary actions. Since the SAB operates under the Federal Advisory Committee Act (FACA), SAB meetings are open to the public and provide an opportunity for public comment. Ordinarily, it is expected that public comments focus on the same issues that are before the Board; i.e., the

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scientific aspects.

Sometimes, however, public comments go beyond "expected bounds" and deal with broader issues. Such comments

- a. Can provide a fresh perspective that helps to sharpen the language in the SAB reports. For example, in May, as a result of public comments, a RAC Advisory was modified to explain what an Advisory is and that SAB approval of an Advisory should not be interpreted as an SAB approval of the final product.
- b. Can contribute useful insights on the implications of SAB advice. For example, as a result of helpful feedback from local authorities participating at last month's SAB/Agency Workshop on Understanding Public Values and Attitudes Related to Ecological Risk Management, the SAB is considering fruitful "next steps" in implementing certain ideas proposed during the meeting.
- c. Can raise the consciousness of SAB members to the depth of feeling/concern about the broader issues under discussion. For example, a letter from four members of Congress and a plea from a gentleman struggling with the death of his father

vividly illustrate the intensity of the personal and political factors associated with the Board's review of the Agency's long-delayed re-assessment of "dioxin".

d. Can be ill-considered, ill-informed, and even reckless.

n balance, public comments have an important role to play in SAB deliberations. As the Board takes on more controversial, high-profile issues (e.g., "dioxin" and arsenic), there are likely to be more interactions with the public at SAB meetings. At the same time, we need to find new ways to make the public comment process more accessible and more effective. It may be unrealistic to expect SAB panelists to digest and effectively deal with a range of disparate public comments received just a few days before a public meeting. [In some cases, there are no written comments at all and only a fiveminute oral statement at the meeting.] Likewise, it may be unrealistic to expect a reasoned public discussion when time constraints limit presentations to no more than five minutes. Also, it may be unrealistic to expect the public to focus solely on the technical issues before the Board, when there is no other readily accessible forum in which to voice their equally legitimate concerns, such as environmental justice issues.

aving identified the problem, there is hope that the parties can think more broadly about how to improve the process. Some suggestions include the following:

- a. Use emerging electronic media techniques to facilitate feedback/discussion among the public, the Agency, and the SAB.
- Strategically, inter-link activities of different FACA committees to focus appropriate comments in appropriate forums in an integrated, coordinated fashion.
- c. Better utilize the public comment time at public meetings to engage in more meaningful dialogue among the parties on selected issues of greatest concern to the greatest number of people.

n short, the SAB exists because of and for the public. All parties benefit from their interaction. Your suggestions for how that interaction can be improved to everyone's mutual benefit are welcome.

Donald G. Barnes, PhD Staff Director

TENTATIVE SAB MEETING CALENDAR FOR JUNE & JULY

Several of the Federal Advisory Committee Act (FACA) meetings noted below have been announced in the Federal Register (FR), together with additional background information. Readers can automatically receive e-mailed copies of FR Notices by subscribing to the SAB Listserver; see Section Updates below.

If a series of meetings is anticipated, the number of the meeting in the series is indicated in parentheses; e.g., "(#2)".





1F Committee: Ecological Processes and Effects Committee (EPEC)

Topics: STAR Waters and Watersheds (Non-FACA)

Location: Ariel Rios Building, Room 6450 DD, Teleconference

Chair: Dr. Terry Young, Environmental Defense

DFO: Ms. Stephanie Sanzone
Email: sanzone.stephanie@epa.gov

11-12 Committee: Executive Committee's Scientific and Technological

Achievement Awards (STAA) Subcommittee

Topics: STAA

Location: Closed Meeting

Chair: Dr. Herb Ward, Rice University

DFO: Mr. A. Robert Flaak
Email: flaak.robert@epa.gov

12-13 Committee: Drinking Water Committee (DWC)

Topics: Candidate Contaminant List (CCL) Research Plan

and Microbial Risk Assessment Paradigm

Location: Governor's House Hotel, Washington, DC

Chair: Dr. Rhodes Trussell, Montgomery Watson Consulting

Engineers

DFO: Mr. Thomas Miller Email: miller.tom@epa.gov

13 F Committee: Executive Committee's National-Scale Air Toxics

Assessment (NATA) Review Panel

Topics: Report Development

Location: Ariel Rios Building, Room 6450, Teleconference
Chair: Dr. Mitchell Small, Carnegie Mellon University

DFO: Dr. K. Jack Kooyoomjian Email: kooyoomjian.jack@epa.gov

22 Committee: Advisory Council on Clean Air Compliance Analysis

(COUNCIL)

Topics: Review of Analytic Blueprint for the Clean Air Act

(CAA) Section 812 Draft Costs and Benefits Report

to Congress

Location: TBD, Teleconference

Chair: Dr. Trudy Cameron, University of California

DFO: Dr. Angela Nugent
Email: nugent.angela@epa.gov

26-27 Committee: Research Strategies Advisory Committee (RSAC)

Topics: Science Plan and Stay the Course Location: Ariel Rios Building, Room 6013

Chair: Dr. Raymond Loehr, University of Texas

DFO: Dr. John "Jack" R. Fowle III

Email: fowle.jack@epa.gov





9-10 Committee: Advisory Council on Clean Air Compliance Analysis

(COUNCIL)

Topics: Review of Analytic Blueprint for the Clean Air Act

(CAA) Section 812 Draft Costs and Benefits Report

to Congress

Location: TBD

Chair: Dr. Trudy Cameron, University of California

DFO: Dr. Angela Nugent
Email: nugent.angela@epa.gov

11 F Committee: Environmental Engineering Committee (EEC)

Topics: Review Meeting - Issues TBA

Location: Ariel Rios Building, Room 6450C, Teleconference
Chair: Dr. Hilary I nyang, University of North Carolina

DFO: Ms. Kathleen White

Email: conway.kathleen@epa.gov

17-18 Committee: Executive Committee (EC)

Topics: Review Meeting and Cumulative Risk Assessment

Framework

Location: USEPA, Cincinnati,OH

Chair: Dr. William Glaze, University of North Carolina

DFO: Dr. Donald G. Barnes Email: barnes.don@epa.gov

18-20 Committee: Ecological Processes and Effects Committee (EPEC)

Topics: Clean Sediment Research & Management Strategy

&

Ecological Management Strategy

Location: TBD

Chair: Dr. Terry Young, Environmental Defense

DFO: Ms. Stephanie Sanzone Email: sanzone.stephanie@epa.gov

23-24 Committee: Clean Air Scientific Advisory Committee (CASAC)

Topics: PM Criteria Document, PM Staff Paper and PM

Research Strategy

Location: USEPA Environmental Research Center, RTP, NC

Chair: Dr. Philip Hopke, Clarkson University

DFO: Mr. A. Robert Flaak
Email: flaak.robert@epa.gov

To View a Tentative 6 Month Calendar Click Here Or

Go to the SAB website www.epa.gov/sab/mtgcal.htm

COMMITTEE ACTIVITIES IN MAY

The next face-to-face EEC meeting will be November 27-29, 2001 in Washington.



n May 1-2, the Research Strategies Advisory Committee (RSAC) held a meeting in Washington, DC to review the President's Science and Technology Budget Request

for EPA for FY2002. This review resulted in a report and testimony given on May 17 by Dr. Randy Seeker, Past RSAC Chair, to the House Science Committee's Subcommittee on Environment, Technology and Standards.

n May 2, the Environmental Engineering Committee (EEC) met by conference call. Dr. I nyang invited the members to share their thoughts on FY2002 initiatives for the SAB. The Committee plans to consider commentaries on industrial ecology and relative risk reduction at its July 11 meeting.

the May 14 teleconference meeting, the Clean Air Scientific Advisory Committee (CASAC) reviewed and approved a Commentary (Exploring Opportunities for Accommodating Emerging Technologies for Continuous Monitoring in Routine Air Monitoring Networks--A Commentary stemming from a CASAC/Agency Workshop) that was prepared by the CASAC Subcommittee on Particle Monitoring. Committee members also discussed planned activities for the rest of this fiscal year, including the planned July 23-24 meeting on the Particulate Matter National Ambient Air Quality Standards (NAAQS).

n May 14 and 25, the National-Scale Air Toxics Assessment
Review Panel, Executive Committee's
Subcommittee, met to conduct technical editing
sessions to its draft advisory on public
conference calls. Lead Discussants on the

Charge questions also met on several dates to revise draft materials during this time-frame.

Committee (EC) met to take action on three reports. The meeting was highlighted by more than a dozen commenters on the Dioxin Reassessment Review Subcommittee (DRRS), Dr. Morton Lippmann of New York University, Chair, and by the rapidly produced RSAC report on the Agency's S&T budget, Dr. Raymond Loehr of the University of Texas at Austin, Chair. The Actions and Instructions at the meeting were as follows:

ACTION 1: The Executive Committee approved the Research Strategies Advisory Committee's (RSAC) report: FY2002 President's Science & Technology Budget Request for USEPA: An SAB Review, subject to final approval by Drs. Glaze, Loehr and Smith. Before the end of the meeting, the recommended edits were made and the entire EC approved the report. Hence, it is ready for immediate transmittal to the Administrator.

ACTION 2: The Executive Committee approved for immediate transmittal the Research Strategies Advisory Committee's (RSAC) report: National Program Directors' Management of Large, Cross-Cutting ORD Research Programs--An SAB Commentary.

ACTION 3: The Executive Committee (EC) approved the Dioxin Reassessment Review Subcommittee's (DRRS) report: Dioxin Reassessment of USEPA--An SAB Report, subject to the following provisos:

- a. The transmittal letter will be redrafted to indicate the complexity of the scientific issues and the associated scientific uncertainties. The letter will highlight 1) the "bottom line" on these matters, as expressed on p. 3, lines 4-8 of the current draft and 2) the need for targeted research, as expressed on p. 12, lines 23-26.
- b. The Executive Summary will be edited in line with the EC's discussion of 1) the role of the Cancer Risk Assessment Guidelines in this review, 2) the "tone" of identified passages dealing with "science-based" positions, and 3) the positive aspects of the Agency's analysis; e.g., the assessment of exposure.
- c. Final concurrence by the vettors: Drs. Anderson, Greer, and Morgan.

The intent is to have a completed report on the Administrator's desk by June 1.

INSTRUCTION 1: Following a recommendation by Dr. Morgan, the following items are to be added to the agenda for the July EC meeting:

- a) A discussion of the process issues associated with the generation of SAB reports; cf., Dr. Greer's concerns about the DRRS report. Dr. Glaze will work with Dr. Barnes to appoint a subgroup to develop this matter for consideration in the July meeting.
- b) Approaches for assessing uncertainty

c) Risk communication in the face of unsettled information.

I NSTRUCTION 2: Dr. Glaze will work with Dr. Barnes to appoint an EC subgroup to look into proper behavior/contacts with SAB members during the time that they are drafting reports.

A draft of the full minutes is available on the SAB Website: www.epa.gov/sab.

Committee's Subcommittee on Industrial Ecology met by conference call to discuss the status of revisions to the draft commentary on industrial ecology and to develop a schedule for completing the report. The following areas were discussed: connection of research to policy, metrics, references, success stories and voluntary measures. Dr. Thomas will take some additional time to work on the areas of biological analogy and resource depletion.

Draft #3 will be sent to the Subcommittee June 1 for comments by June 14. A subsequent draft will be released to the Subcommittee and the public prior to a conference call to be held in late June or early July. The Subcommittee hopes to approve its commentary at that conference call and forward it to the EEC for consideration on its July 11 conference call.

n May 23, the Executive Committee (EC) met by conference call to take action of two reports from the Radiation Advisory Committee, Dr. Janet Johnson of Shepherd-Miller, Chair. The Actions were as follows:

ACTION 1: The Executive Committee approved the Radiation Advisory Committee's "Radiation in Sewage Sludge: Interagency Steering Committee on Radiation Standards (ISCORS) Dose Modeling Report - An SAB Advisory", subject to edits described at the meeting. With these changes, the Advisory is ready for transmittal to the Administrator without further examination by the EC or vettors.

ACTION 2: The Executive Committee approved the Radiation Advisory Committee's "GENII Ver. 2: USEPA's Use and Adaptation of GENII Environmental Radiation Dosimetry System -- An SAB Advisory", subject to final edits discussed at the meeting. With these changes, the Advisory is ready for transmittal to the Administrator without further examination by the EC or vettors.

A draft of the full minutes is available on the SAB Website: www.epa.gov/sab.

n May 25, the Environmental Economics Advisory Committee (EEAC) met in Alexandria, Virginia. purpose of the meeting was to: (a) Consult with EPA representatives on the agency's planned activities to develop analytical approaches for the implementation of Executive Order 13141 which addresses environmental reviews for Trade Agreements; (b) discuss EPA's intention to determine whether it should request that EPA and the Science Advisory Board conduct a joint workshop on ways to estimate the benefits from premature mortality risk reductions that are predicted to result from

environmental regulations; and (c) receive a briefing by EPA representatives on BEN, the Agency's economic benefit recapture approach for enforcement purposes.

Mr. Thomas Gibson, newly appointed Associate Administrator for Policy, Economics, and Innovation, and Counsel to the Administrator, was the special quest speaker for this meeting of the EEAC. Mr. Gibson noted both the President's and the Administrator's commitment to solid science and economics and their place as key elements in environmental decision making. Mr. Gibson focused on four issues in his remarks: a) EPA's initiatives directed toward improving the regulatory development process, b) new informational requirements for all US Government regulations because of energy concerns, c) trade and the environment, and d) a soon to be received request to SAB that a panel be formed to review EPA's existing benefits analysis for arsenic rulemaking in drinking water. Mr. Gibson also noted a number of other areas where the EEAC could help EPA with important issues.

Individual panelists engaged with EPA representatives in a Consultation on Agency plans for a Trade and Environment Analysis Model (TEAM) to implement EPA's responsibilities within the overall Executive Order that requires an early environmental review of trade agreements. They also discussed a number of research topics that EPA would like to pursue in this area. Joining EPA representatives and the Panel for the Consultation was Dr. David Walters of the US Trade Representative's Office. Individual members reflected an interest in some further interaction with EPA on this topic in the future. SAB LECTURE
SERIES

n April 4, 2001, the SAB hosted the fifth lecture in the second year of its series, "Science and the Human Side of Environmental Protection." The presenter was Dr. Robin Gregory, senior researcher at Decision Research (Eugene, Oregon), a nonprofit institute that does research and consulting in risk management, environmental policy analysis, and decision making processes of individuals, groups, and society. He is also Associate Director of the Eco-Risk Research Unit at the University of British Columbia in Vancouver, British Columbia. Dr. Gregory spoke on the topic "Decision Aiding, Not Consensus: Using Structured Decision Processes to Link Consultation and Analysis." Sixteen people from six Headquarters Offices and one region participated.

Dr. Gregory introduced his presentation as an introduction to how decision science can help structure "smart choices" about environmental and health risks. He linked his work to the many calls for increased consultation and analysis in risk management (e.g., National Academy of Science Report, *Understanding Risk* and Canadian Roundtable on the Environment) and described it as an effort to improve the knowledge base for successful consultations. In his presentation, he outlined components of a structured, valuefocused process for understanding and evaluating environmental choices; described key methodological approaches and policy implications; and presented examples of structured decision processes in the United

States and Canada.

The first part of his talk defined terms and drew distinctions. A "structured decision process" addresses basic questions: (1) what are the decisions to be made?; (2) what matters?; (3) what are the alternatives?; (4) what are the impacts of the alternatives?; and (5) what alternatives can stakeholders support? The purpose of such a process is to aid decision-making, rather than to achieve consensus and resolve disputes. The "decision-aiding approach" focuses on identifying important objectives or values for participants, seeks insight for the decision maker, and provides "judgmental heuristics" (i.e., decision-making help).

One of Dr. Gregory's key assumptions was that preferences of participants are "constructed" and dependent on context and timing, and not fixed. In Dr. Gregory's view, analysts are "architects," who help participants learn about an issue and build their preferences, not "archeologists," as in the contingent valuation approach, where analysts discover preexisting preferences.

Dr. Gregory described the key steps involved in implementing the structured, decision-aiding approach: (1) identify stakeholders and determine whose voice counts; (2) distinguish between "means" and "ends" objectives; (3) select attributes, i.e., measures of success in addressing objectives; (4) present alternatives to enhance evaluability; (5) clarify uncertainty; (6) conduct tradeoff analysis; and (7) learn through the process. He provided details about tools and methods for each step and compared the structured approach to conventional risk

management processes.

He then briefly described three examples where the structured decision-aiding approach was used: (1) a small group consultation on the Alouette River, British Columbia; (2) work with the Tillamook Bay National Estuary Program, Oregon, to develop scientific and public input into the Comprehensive Conservation and Management Plan; and (3) decision pathways survey for the Ontario Ministry of Natural Resources, where a decision-pathway survey was used to assess alternatives for managing unwanted forest vegetation.

Dr. Gregory concluded his presentation by summarizing the goals for the decision aiding approach. It aims to represent values as faithfully as possible; represent a full range of reasonable alternatives; gain insight, not a "right number" or a "right choice;" lead to more open, more accountable public decision processes; and account for the "big picture" that includes the cognitive and affective dimensions, local and national concerns, and short and long-run considerations.

Ms. Elaine Davies, Acting Director, Office of Emergency and Remedial Response in the Office of Solid Waste and Emergency Response, who had been asked to begin the discussion with her comments, started the conversation with several observations and questions. She noted that public involvement approaches that focused on building consensus often did not maximize the generation of creative solutions to environmental problems. She noted that the approach Dr. Gregory had described was appealing and practical and might have applications at the local, regional

and national scale

She asked about the approach used to pick people to participate in the decision-aiding consultation groups. Dr. Gregory responded that he usually oriented the choice of participants around interests related to the problem and also that he identified individuals from the general communities, local scientists, and persons who were a link to local governments.

Ms. Davies inquired whether results from decision-aiding consultations had been used by the Office of Management and Budget (OMB) and found to be useful. Dr. Gregory responded that, to his knowledge, OMB had not been presented with the results from a constructed preference process, but that such information might be useful because it would present a range of alternatives and meaningful information about related preferences.

Dr. Gregory and Ms. Davies then discussed several other issues. The decision-aiding consultation process might prove effective in solving hazardous waste problems, because it can be used to generate creative alternatives to traditional approaches. Dr. Gregory described how he often begins a group process by posing "straw" alternatives to begin discussion and then working with the group to combine alternatives and develop new ones.

The broader group then joined the discussion. Staff from OAR asked about how different methods or tools were introduced into the group process. Dr. Gregory responded that the first questions to ask were "what kinds of things matter" and then "what are the attributes" or measures of the objectives

sought. He'd often facilitate group discussions, write up the major points and reflect findings to the group. The decision tools available (e.g., influence diagrams, mental models) can be used to "ferret out" information and help dialogue. He emphasized that the process of defining specific measures for objectives was needed for different parties to understand each other and to identify alternatives not yet considered.

Staff from OPPTS asked how findings gained in small groups translate to decisions made by larger groups. Dr. Gregory responded that decision-aiding consultations with small groups can inform a decision maker about the values of a larger group. He often keeps a community informed about the results of small group work through newspaper articles and town meetings or relies on individual members of the small group to communicate results to their own interest group or the larger audience. He concluded by acknowledging the difficulty of informing and involving the broad public in risk-related decisions in a meaningful way as a major challenge of representative government.

Dr. Gregory provided copies of his slides and a recent article "Using Stakeholder Values to Make Smarter Environmental Decisions" from *Environment*, 2000. Please contact Angela N u g e n t (202-564-4562 or nugent.angela@epa.gov) for copies. The SAB plans to host lectures on the social sciences on a periodic basis to highlight how the social sciences can help solve actual environmental problems. If you have suggestions for future speakers or topics, please contact Dr. Nugent.

SAB WORKSHOP

n May 23-24, 2001, EPA and the Science



Advisory Board cosponsored a public Workshop on "Understanding Public Values and Attitudes Related to Ecological Risk Management." The workshop was not an advisory committee

meeting, organized with the purpose of providing advice to the Agency. Instead, it was a public meeting designed to demonstrate how researchers using different kinds of analytical methods, tools and approaches from the social sciences can mutually inform each other and risk managers in understanding: (a) public values and attitudes related to specific threats to ecological resources, such as Tampa Bay Estuary, a water body threatened with nitrogen deposition and (b) the significance of those values to decision makers.

The workshop was chaired by Dr. Baruch Fischhoff of Carnegie Mellon University. Dr. Milton Russell, of the University of Tennessee described how the workshop was linked to the Science Advisory Board's report, Toward Integrated Environmental Decision -Making and how it was designed to address persistent problems that risk managers face in protecting ecological resources. The Senior Scientist from the Tampa Bay Estuary program, Holly Greening, characterized the risk assessment and risk management problems facing the Bay. Four researchers from different social science traditions then presented research strategies to aid managers in understanding the values and attitudes of people interested in and affected by the bay, and specifically by the problem of air deposition of nitrogen to the bay. Presenters were: Dr. Terry Daniel, Department of Psychology, University of Arizona, Tucson, Arizona; Dr. Robin Gregory, Decision Research, North Vancouver, B.C., Canada; Dr. Willett Kempton, College of Marine Studies, University of Delaware, Newark, Delaware; and Dr. James Opaluch, Department of Environmental and Natural Resource Economics, University of Rhode Island, Kingston, Rhode Island.

A managers' panel on the second day then addressed the question of the opportunities and issues presented by the research proposals described. The panel consisted of managers from local and state governments and from EPA headquarters and EPA's Region 4, the region for Tampa Bay.

The chair of the workshop has prepared a draft "Sense of the Meeting Summary" which identifies the different themes, issues and action items discussed during the panel and audience discussions. The draft summary organizes points in the following areas: environmental science; social, economic and behavioral sciences; policy makers; stakeholders; research development and research needs. This draft summary will be posed o n the SABwebsite (http://www.epa.gov/sab) under the button for "New" topics for comment until June 7, 2001. The summary will be finalized after that time and integrated into a Workshop Report, which will include the "Research Plans" presented at the workshop, along with documentation of the agenda, panel members, audience and panel

discussion. The report will then be available to the interested public on the SAB website.

The Workshop was co-sponsored by EPA's Office of Air and Radiation; the National Center for Environmental Economics in the Office of Policy, Economics and Innovation; the Office of Research and Development, the Office of Water; and the Office of the Science Advisory Board. One hundred and eleven people participated in the workshop in the course of the two-day event.

SAB REPORTS IN PROGRESS



PROJECTS TO BE REVIEWED AT A TO BE
DETERMINED JUNE EC TELECONFERENCE

None at this time.

b PROJECTS DUE FOR LATER EC MEETING

IRP/EEC

 Review of the IRP Risk Reduction Options Report

EPEC

2) Review of the Framework for Reporting on Ecological Conditions Review of STAR Waters and Watersheds

EC Subcommittees

- 4) Improving Science-Based
 Environmental
 Stakeholder Processes
- 5) NATA Review Report
- PROJECTS THAT DO NOT REQUIRE EC

 APPROVAL (CASAC & COUNCIL)

None at this time.

d PROJECTS THAT HAVE RECEIVED EC

EEC

 Commentary on Measures of Environmental Technology Performance

RAC

- 2) Advisory on ISCORS Radionuclides in Sewage Sludge: Dose Assessment Dose Modeling
- 3) Advisory on GENII Version 2.0

ABSTRACTS OF NEW REPORTS



Monitored Natural Attenuation: USEPA
Research Program - An EPA Science
Advisory Board Review
EPA-SAB-EEC-01-004

Monitored Natural Attenuation (MNA) is a knowledge-based remedy where a proper engineering analysis informs the understanding, monitoring, predicting, and documenting of the natural processes. The EPA Science Advisory Board reviewed the Environmental Protection Agency's research program for MNA of contaminants in groundwater, soils, and sediments; evaluated ORD's research in terms of its scientific quality and its effectiveness and utility for promoting sound decisions about the use of MNA as a remedy at specific sites; and assessed the applicability and limitations of the EPA's guidance as expressed in the 1998 Technical Protocol on MNA. In its review, the Subcommittee made extensive use of the recent Natural Attenuation for Groundwater Remediation (2000) published by National Academy Press.

MNA is widely used for the remediation of contaminated sites. Scrupulous attention to site-specific studies is required to document that processes that destroy or immobilize contaminants are well-understood and sufficiently documented to ensure an acceptable remedy.

Specifically, the Subcommittee found that the Agency's present research program is well-established and scientifically sound. EPA research has contributed substantially to an improved understanding of MNA and its applications. However, a great deal remains unknown and the EPA's present research program is incommensurate with support of the widespread application of this remedy. Significant additional focused research is needed to support the evaluation of MNA for application to chlorinated solvents, fuel additives, inorganic compounds, and contaminated sediments or to soils and sediments.

The Subcommittee's report provides recommendations to strengthen the science base through the EPA research program on chlorinated solvents, fuel additives, inorganics, and sediments. The improvement in the science basis should lead to improvement of frameworks and guidance.

FY2002 Presidential Science and
Technology Budget Request for the
Environmental Protection Agency;
An SAB Review

EPA-SAB-RSAC-01-005

The Research Strategies Advisory Committee (RSAC) of the Science Advisory Board (SAB) met May 1 and 2, 2001 to review the Science and Technology portion of the FY 2002 Presidential Budget Request for the U.S. Environmental Protection Agency (EPA). The S&T component of the total Agency budget has

remained approximately 9% for more than a decade. RSAC notes that the current and future environmental and health problems have become increasingly complex and multi-media. RSAC recommends, therefore, that the Agency and Congress consider increasing the S&T share of the total Agency budget by a modest but important additional 1% per year for the next three years from its current level of 9% of the total Agency budget to 12% of the Agency's budget in FY '04. The Presidential Science and Technology (S&T) budget request is similar to the level requested in the last three years, and it is \$39 million less than last year's enacted budget due to the EPA policy of not requesting Congressional add-ons (earmarks). RSAC strongly recommends that if Congress adds specific projects and programs for EPA, Congress also appropriate the funds needed for the successful completion of those projects and programs as was done in the current fiscal year appropriations. commends ORD on the development and implementation of its planning structure for The use of National Program research. Directors to serve as a focus for coordination and developing strategy for addressing major issues has been very effective and RSAC endorses continuation of this approach. RSAC recommends that the criteria used for the classification of research activities as "core" or "problem-driven" should be clearly stated and applied consistently. RSAC strongly recommends that the Agency be vigilant in defining and maintaining core research needed to achieve a balanced S&T research program. RSAC notes that nearly 50% of the ORD workforce is over the age of 50, and to remain vital, the Agency must assemble the next generation of its scientists and engineers. An important approach to accomplishing this is the

post-doctoral program, but it appears that this approach may be limited by the FTE ceiling imposed on ORD. RSAC recommends that EPA explore possibilities to have the ORD FTE limits not apply to the number of post-doctoral fellows who can be hired under this program. RSAC recognizes that there is more science being conducted at EPA than is identified in the S&T budget. RSAC recommends that EPA continue with its Science Inventory efforts which catalogue science projects and products, so as to capture and identify the extent of science being done at EPA and expand the planning process to include development of an overall science planning process for the Agency that uses the Science Inventory as a reference. This inventory that should be updated at least annually, with appropriate adjustments to multi-year plans, would make the Agency's direction in its research program much more understandable.

Dioxin Reassessment - An SAB Review of the Office of Research and Development's Reassessment of Dioxin EPA-SAB-EC-01-006

The SAB Dioxin Reassessment Review Subcommittee (DRRS) (of the SAB Executive Committee) met on November 1 and 2, 2000 to review revised sections of the EPA draft document Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds (in addition, the DRRS met via public teleconference on January 23 and on April 23, 2001, to discuss several issues that needed further resolution).

The DRRS concluded that EPA Staff provided a careful, thorough review of the voluminous literature and it commended EPA for their efforts. The report addresses each of the specific charge questions, provides suggestions for final revisions to the reassessment document, and points out uncertainties that limit EPA's ability to communicate the magnitude of the health risks associated with dioxin and related compounds. The Subcommittee believes that additional research is unlikely to bridge many of the important data gaps in the foreseeable future, and recommends that the Agency proceed expeditiously to complete and release its Risk Assessment, taking appropriate note of the findings and recommendations of this DRRS report and other public comments.

Consistent with basic environmental policy, and recognizing the very long biological and environmental persistence of dioxins, the Subcommittee believes that it is important that EPA continue to try to limit emissions (and human exposure) to this class of chemicals. It is also critical for EPA to closely examine current data and modeling gaps, and to develop a research plan to remedy them.

on National Program Directors in ORD for Managing Large Crosscutting Programs

EPA-SAB-RSAC-COM-01-002

The Research Strategies Advisory Committee (RSAC) of the Science Advisory Board (SAB) met on March 7, 2001 to conduct a consultation on the topic of the National Program Directors (NPDs) in the Office of Research and Development (ORD). Based on this discussion, the RSAC decided to prepare a commentary to provide our assessment and advice regarding the National Program Directors in ORD. RSAC found that the management structure utilizing National Program Directors with a lead executive, while fairly new, is well organized and efficient. The committee noted that there were differences in the functioning of the National Program Directors among different programs, and it thinks that this flexibility and tailoring of NPD activities is a good attribute that ORD should continue to cultivate. RSAC recommends that the Agency establish a set of defined criteria and standards to implement a transparent process to decide when a National Program Director is needed and when one is not necessary. RSAC recommends that additional staff support be provided for the NPDs and be adequate for their assigned tasks and it recommends that ORD allocate limited budget authority to the NPDs consistent with the management needs of the particular program. Overall, the committee strongly endorses the continuing use of National Program Directors and for strengthening some aspects of this management structure.

Exploring Opportunities for Accommodating

Emerging Technologies for Continuous

Monitoring in Routine Air Monitoring

Networks - A Commentary Stemming

from a CASAC/Agency Workshop

EPA-SAB-CASAC-COM-01-003

The Subcommittee on Particle Monitoring of the Clean Air Scientific Advisory Committee (CASAC) held a public workshop to explore opportunities for accommodating emerging technologies into routine air monitoring networks. The workshop was convened to provide states and associations of states, vendors and manufacturers of monitoring equipment, and EPA staff with an opportunity to share information and discuss emerging technologies and the implications of considering continuous monitoring in EPA's regulatory monitoring program.

As a result of discussions at the workshop, the Subcommittee concluded that EPA should move aggressively forward to bring continuous monitoring into the regulatory monitoring program. The CASAC endorsed the Subcommittee recommendations, including:

- a) Perform a statistical analysis following a Data Quality Objectives (DQO) type process to ascertain what level of precision will be required in the continuous monitors to yield the same information on area-wide average concentrations as a minimum Federal Reference Sample (FRM) PM_{2.5} sampler network:
- b) Develop an approach to empower and encourage states or associations of states to qualify continuous samples on a local to regional basis;
- c) Involve the states/local agencies in the determination of the cost savings for various options while ensuring that the data quality is appropriate for making critical

management decisions;

- d) Whenever possible, site the continuous monitor/FRM pairs at speciation sites;
- e) Ensure that the outcome of these analyses can be appropriately applied to future monitoring needs.
- f) Make full use of the results of the ongoing supersite activities as they become available.
- Research and Development's National
 Program Director Program
 EPA-SAB-RSAC-CON-01-001

There are no abstracts for consultations.

g Notification of a Consultation on Multi-year

Planning and Performance Metrics for
Science at EPA

EPA-SAB-RSAC-CON-01-002

There are no abstracts for consultations.

Notification of a Consultation on Trade and the Environment EPA-SAB-EEAC-CON-01-003

There are no abstracts for consultations.

COMPUTER NEWS

(1) SAB Website is within the EPA Home Page. You are invited to visit the SAB Website at URL: http://www.epa.gov/sab
The site offers such features as



- (a) Full-text reports for FY1994-FY2001
- (b) Background information about the structure, function, and membership of the SAB
- (c) A rolling two-month calendar of SAB meetings
- (d) The most current issue of HAPPENINGS
- (e) Draft/final agendas of upcoming meetings and draft/final minutes of past meetings.
- (2) SAB Listserver By subscribing to the free SAB Listserver, you will automatically receive copies of all Federal Register notices announcing SAB meetings, together with brief descriptions of the topics to be covered at the meetings. These notices will be e-mailed to you within 24-hours of their publication in the Federal Register.

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STAFF/MEMBERS/CONSULTANTSNEWS

Members/Consultants News



Dr. W. Randall Seeker, a member of the Research Strategies Advisory Committee (RSAC) appeared before the Subcommittee on Environment, Technology, and Standards of

the House Science Committee to provide testimony (http://www.house.gov/science/ets/may17/seeker.htm) about the RSAC's review of the President's Budget Request for Science & Technology at USEPA. Dr. Seeker appeared along with Mr. Henry Longest, Acting AA/ORD and Dr. Ronald Hammerschmidt of Kansas Department of Health and Environment, who is also Vice-President of the Environmental Council of the States (ECOS).

Dr. Keith Harrison, a consultant to the



Science Advisory Board, was appointed Acting Director of the Office of the Great Lakes on May 31, 2001. The Office of the Great Lakes oversees protection and management of

the Great Lakes by coordinating Michigan

programs and policies and by cooperating with other states and the U.S. and Canadian federal governments regional, national and international programs and policies.

Вом Мот



Increasingly the SAB is dealing with the economics in the context of its reviews. Here is an insight into health care economics, as contributed by Dr. Gene McConnell -- SAB Consultant, veterinary pathologist, and graduate of the Practical School of Economics.

A man brought a very limp dog into the veterinary clinic. As he lay the dog on the table, the doctor pulled out his stethoscope, placing the receptor on the dog's chest. After a moment or two, the vet shook his head sadly and said, "I'm sorry, but your dog has passed away."

"What?" screamed the man. "How can you tell? You haven't done any testing on him or

anything. I want another opinion!"

With that, the vet turned and left the room. In a few moments, he returned with a Labrador Retriever. The Retriever went right to work, checking the poor dead dog out thoroughly with his nose. After a considerable amount of sniffing, the Retriever sadly shook his head and said, "Bark" (meaning "dead as a doornail").

The veterinarian then took the Labrador out and returned in a few moments with a cat, who also carefully sniffed out the poor dog on the table. As had his predecessors, the cat sadly shook his head and said, "Meow" (meaning "he's history"). He then jumped off the table and ran out of the room.

The veterinarian handed the man a bill for \$600. The dog's owner went berserk. "\$600! Just to tell me my dog is dead? This is outrageous!"

The vet shook his head sadly and explained. "If you had taken my word for it, the charge would have been \$50, but with the Lab work and the cat scan....."